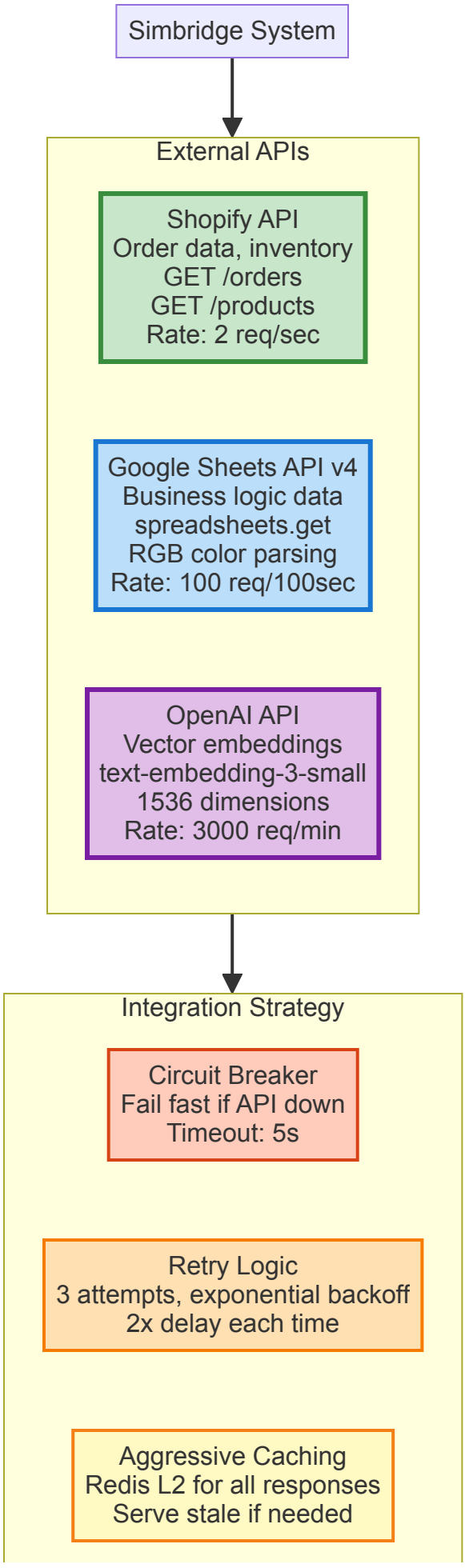
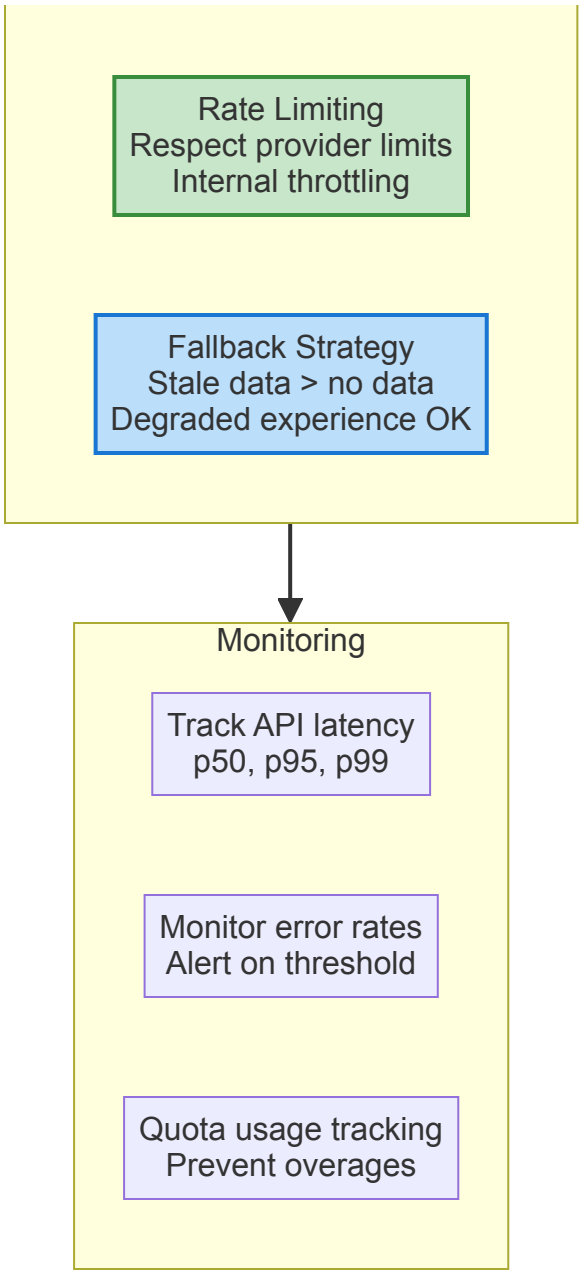
DIAGRAM 19: Component #12 - External API Integrations


Simbridge System
External APIs
Shopify API
Order data, inventory
GET /orders
GET /products
Rate: 2 req/sec
Google Sheets API v4
Business logic data
spreadsheets.get
RGB color parsing
Rate: 100 req/100sec
OpenAI API
Vector embeddings
text-embedding-3-small
1536 dimensions
Rate: 3000 req/min
Integration Strategy
Circuit Breaker
Fail fast if API down
Timeout: 5s
Retry Logic
3 attempts, exponential backoff
2x delay each time
Aggressive Caching
Redis L2 for all responses
Serve stale if needed


Rate Limiting
Respect provider limits
Internal throttling
Fallback Strategy
Stale data > no data
Degraded experience OK
Monitoring
Track API latency
p50, p95, p99
Monitor error rates
Alert on threshold
Quota usage tracking
Prevent overages